

Application No. 09/100,799
Amendment dated April 7, 2005
Reply to Final Office Action of January 11, 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Withdrawn) An apparatus capable of image capturing comprising:
an imaging device which captures image data;
a recorder for recording image data transferred from said imaging device into a specified medium;
a display unit for displaying the image data transferred from said imaging device;
an exposure controller for controlling exposure in capturing an image by means of said imaging device; and
a changer for changing exposure control by said exposure controller between recording by the recorder and displaying by the display unit.
2. (Withdrawn) An apparatus capable of image capturing as claimed in claim 1, wherein said exposure controller controls the exposure by changing an aperture stop.
3. (Withdrawn) An apparatus capable of image capturing as claimed in claim 2, wherein said exposure controller sets the aperture stop larger in a displaying stage than in a recording stage.
4. (Withdrawn) An apparatus capable of image capturing as claimed in claim 1, wherein said exposure controller controls exposure by changing a shutter speed.
5. (Withdrawn) An apparatus capable of image capturing as claimed in claim 4, wherein said shutter speed at a time of capturing an image for display use is set

slower than a shutter speed at a time of capturing an image for recording use when a subject has a luminance lower than a specified luminance.

6. (Withdrawn) An apparatus capable of image capturing as claimed in claim 4, wherein said shutter speed at a time of capturing an image for display use is set faster than a shutter speed at a time of capturing an image for recording use when a subject has a luminance lower than a specified luminance.

7. (Withdrawn) An apparatus capable of image capturing as claimed in claim 2, wherein a gamma correcting portion for correcting a gradation characteristic of an image is provided and said changer changes the gradation characteristic between recording and displaying.

8. (Withdrawn) An apparatus capable of image capturing as claimed in claim 7, wherein said gamma correcting portion sets a gradation characteristic corresponding to the type of an image output destination.

9. (Withdrawn) An apparatus capable of image capturing as claimed in claim 8, wherein the image output destination is a built-in monitor unit or an external monitor unit.

10. (Currently Amended) An apparatus capable of image capturing comprising:

- an imaging device which captures image data;
- a recorder for recording image data transferred from said imaging device into a specified digital storage medium;
- a display unit for displaying the image data transferred from said imaging device;
- an interpolating portion for executing interpolation of pixels constituting image data, the interpolating portion executing a first interpolation when displaying by the display unit, while executing a second interpolation different from the first interpolation

when recording by the recorder, both the first and second interpolation being processes for interpolating unknown pixels from the pixels of the image data; and

a changer for changing an interpolating process by said interpolating portion depending on which one of recording by the recorder and displaying by the display unit is performed.

11. (Previously Presented) An apparatus capable of image capturing as claimed in claim 10, wherein said changer executes in a displaying stage an interpolating process of a faster processing speed than in a recording stage.

12. (Original) An apparatus capable of image capturing as claimed in claim 10, wherein a gamma correcting portion for correcting a gradation characteristic of an image is provided and said changer can change the gradation characteristic between recording and displaying.

13. (Original) An apparatus capable of image capturing as claimed in claim 12, wherein said gamma correcting portion sets a gradation characteristic according to the type of an image output destination.

14. (Original) An apparatus capable of image capturing as claimed in claim 13, wherein the image output destination is a built-in monitor unit or an external monitor unit.

15. (Original) An apparatus capable of image capturing as claimed in claim 10, wherein said interpolating portion executes an interpolating process based on data of each color of the image data.

16. (Original) An apparatus capable of image capturing comprising:
an imaging device which captures image data;
an image recording mode setting portion capable of setting an image recording mode;

a band correcting portion for correcting a frequency characteristic of image data transferred from the imaging device;

a gamma correcting portion for correcting a gradation characteristic of the image data transferred from the imaging device; and

a controller for controlling the band correcting portion and the gamma correcting portion according to the set image recording mode.

17. (Original) An apparatus capable of image capturing as claimed in claim 16, wherein said band correcting portion has a plurality of frequency characteristics.

18. (Original) An apparatus capable of image capturing as claimed in claim 16, wherein said gamma correcting portion has a plurality of gradation characteristics.

19. (Original) An apparatus capable of image capturing as claimed in claim 16, wherein said image-recording mode setting portion sets a size of an image to be recorded.

20. (Original) An apparatus capable of image capturing as claimed in claim 19, wherein said controller controls the band correcting portion so as to emphasize an immediate-frequency component of frequency components included in the image as the image size set by the image recording mode setting portion decreases.

21. (Original) An apparatus capable of image capturing as claimed in claim 19, wherein said controller controls the gamma correcting portion so as to emphasize a contrast of the image as the image size set by the image recording mode setting portion decreases.

22. (Previously Presented) An apparatus capable of image capturing as claimed in claim 16, wherein said image-recording mode setting portion sets a compression rate in a recording stage.

23. (Original) An apparatus capable of image capturing as claimed in claim 22, wherein said controller controls the band correcting portion so as to suppress a high-frequency component of frequency components included in the image as the compression rate set by the image recording mode setting portion increases.

24. (Original) An apparatus capable of image capturing as claimed in claim 22, wherein said controller controls the gamma correcting portion so as to emphasize a contrast of the image as the compression rate set by the image recording mode setting portion increases.

25. (Currently Amended) An apparatus capable of image capturing as claimed in claim 16, wherein said image[[-]]recording mode setting portion has a mode in which a halftone image is recorded as a mode to be set.

26. (Original) An apparatus capable of image capturing as claimed in claim 25, wherein said controller controls the band correcting portion so as to emphasize an immediate-frequency component of frequency components included in the image when the mode in which a halftone image is recorded is set in the image recording mode setting portion.

27. (Previously Presented) An apparatus capable of image capturing as claimed in claim 26, wherein said controller controls the band correcting portion so as to further suppress a high-frequency component of the frequency components included in the image.

28. (Original) An apparatus capable of image capturing as claimed in claim 25, wherein said controller controls the band correcting portion so as to suppress a high-frequency component of the frequency components included in the image when the mode in which a halftone image is recorded is set in the image recording mode setting portion.

29. (Original) An apparatus capable of image capturing as claimed in claim 25, wherein said controller controls the gamma correcting portion so as to emphasize a contrast of the image further than a specified reference gradation characteristic when the mode in which a halftone image is recorded is set in the image recording mode setting portion.

30. (Currently Amended) An apparatus capable of image capturing as claimed in claim 16, wherein said image[[-]]recording mode setting portion has a mode in which a binary image is recorded as a mode to be set.

31. (Original) An apparatus capable of image capturing as claimed in claim 30, wherein said controller controls the band correcting portion so as to emphasize an intermediate-frequency component of frequency components included in the image when the mode in which a binary image is recorded is set in the image recording mode setting portion.

32. (Original) An apparatus capable of image capturing as claimed in claim 30, wherein said controller controls the gamma correcting portion so as to emphasize a contrast of the image further than a specified reference gradation characteristic when the mode in which a binary image is recorded is set in the image recording mode setting portion.

33. (Previously Presented) An apparatus capable of image capturing comprising:

- an imaging device having a filter array of a plurality of colors;
- a compression rate setting portion for setting a compression rate of image data;
- an interpolating portion for executing pixel interpolation based on data of colors constituting said image data, said interpolating portion having a plurality of interpolators; and
- a controller for selecting one of said plurality of interpolators according to a compression rate set by said compression rate setting portion.

34. (Original) An apparatus capable of image capturing as claimed in claim 33, wherein an image size setting portion for setting an image size is provided and said controller controls the interpolating portion according to the image size set by the image size setting portion.

35. (Previously Presented) An apparatus capable of image capturing as claimed in claim 33, wherein an interpolating process that is executed in said interpolating portion is selected out from among an interpolating process employing an average filter, an interpolating process employing a median filter and an interpolating process for executing simple interpolation with adjacent pixel data.

36. (Original) An apparatus capable of image capturing as claimed in claim 33, wherein an interpolating process of a higher processing speed is executed as the compression rate set by the compression rate setting portion is higher.

37. (Previously Presented) An image data processing method for an apparatus capable of image capturing, comprising the steps of:

setting a compression rate of image data obtained from an imaging device; and
executing an interpolating process, which is selected from a plurality of interpolating processes, on image data of colors constituting the image data according to the set compression rate.

38. (Original) An image data processing method as claimed in claim 37, wherein an interpolating process of a higher processing speed is executed in the apparatus capable of image capturing as the set compression rate becomes higher in interpolating process control.

39. (Currently Amended) An image data processing method for an apparatus capable of image capturing which can selectively display a captured image or record a captured image on a digital storage medium, comprising the steps of:

capturing image data by means of an imaging device; and

executing a varied interpolating process depending on whether the captured image is to be displayed or recorded on the digital storage medium, wherein a first interpolating process is executed when displaying, while a second interpolating process different from the first interpolating process is executed when recording, both the first and second interpolation being processes for interpolating unknown pixels from the pixels of the image data.

40. (Previously Presented) An image data processing method as claimed in claim 39, wherein an interpolating process of a faster processing speed is used in displaying the image than the interpolating process in recording the image during said interpolating process.

41. (Original) An image data processing method as claimed in claim 39, further comprising a gamma correcting step for correcting a gradation characteristic of an image.

42. (Previously Presented) An apparatus capable of image capturing as claimed in claim 10, wherein the image data generated by said imaging device is of a Bayer array.

43. (Previously Presented) An image data processing method as claimed in claim 39, wherein the image data generated by said imaging device is of a Bayer array.